

AMENDMENTS TO THE CLAIMS:

1. (Currently amended) An improved pump drive head having an integrated stuffing box and comprising:

a power transmission coupled to a rotating pump drive shaft within a crude oil well;

a stuffing box to retain the pressure; and

a thrust assembly adapted to take the tensile force exerted on said pump shaft,

wherein said power transmission comprises a tube arranged to be rotated coaxially with the shaft and having at least two different diameters,

wherein ~~the~~ rotary seals fit over a ~~the~~ small outside diameter of the tube to establish fluid-tightness between said tube and the body of the stuffing box, the outside diameter of the seals being smaller than the large outside diameter of said tube, and

wherein a ~~the~~ tube-to-shaft fit incorporates static seals and the static ones and rotary ones of the seals are adapted, by virtue of a retainer ring provided inside said stuffing box, to come away along with said tube and the component parts associated with the seals ~~inside said stuffing box~~.

Claim 2. (Previously presented) An improved head according to Claim 1, wherein the tube, being rotated coaxially with the shaft, is connected with its bottom end axially to a sleeve for rotation therewith and jointly defining said large and small diameters, the small diameter locating inside the stuffing box and the tube and sleeve, once connected together, forming a unitary piece.

Claim 3. (Currently amended) An improved head according to Claim 2 ~~1~~, wherein a rotary gasket is provided on a ~~the~~ bottom end of said unitary piece including said tube and sleeve ~~tube/sleeve~~ for rotation therewith, the outside diameter of the gasket comprising ~~being~~ a labyrinth pattern.

Claim 4. (Currently amended) An improved head according to Claim 3 ~~4~~, wherein said gasket is connected to the retainer ring of the seals on said unitary piece including said tube and sleeve ~~tube/sleeve~~ of the stuffing box.

Claim 5. (Currently amended) An improved head according to claim 4 ~~4~~, wherein an outside-communicated tapping hole is provided downstream of at least one of the gasket and ~~and/or~~ the ~~respective oil~~ seals in the direction of the pressurized flow from the well.

Claim 6. (Currently amended) An improved head according to claim 1, wherein, when the rotary seals comprise packing seals, an oil seal is provided downstream of the rotary seals and of an ~~the~~ inlet hole for the liquid lubricant to the packing, the packing being mounted between said unitary piece including said tube and ~~tube/rotating~~ sleeve and an ~~the~~ inner seat of the stuffing box.

Claim 7. (Currently amended) An improved head according to claim 1, wherein a ~~the~~ packing is mounted on said ~~rotating~~ sleeve through at least one detent ring and a pre-load spring between the packing and said retainer ring.

Claim 8. (Currently amended) An improved head according to Claim 1, wherein a ~~the~~ packing is mounted around the small diameter of said unitary piece including said tube and ~~tube/rotating~~ sleeve and is held in place ~~there~~ by at least one axial retainer ring and a pre-load spring placed between the packing and an ~~the~~ axial thrust assembly.

Claim 9. (Previously presented) An improved head according to Claim 2, wherein the static seals are placed for reduced radial bulk in the joint region between said tube and said sleeve, and are compressed there to make a tight seal as said tube and sleeve are made fast together.

Claim 10. (Currently amended) An improved head according to Claim 1, wherein the static seals are placed for convenient replacement in the joint region between said tube and the shaft, and

make a tight fit within ~~a~~ the skirt of ~~a~~ the top cover.

Claim 11. (Previously presented) An improved head according to claim 1, wherein said tube is connected to the thrust assembly for rotation therewith by a rotating hub held in place by a guiding tighten-down means.

Claim 12. (Previously presented) An improved head according to Claim 11, wherein said guiding tighten-down means comprises a rolling thrust bearing and a bell enclosing said hub and said thrust bearing.

Claim 13. (Previously presented) An improved head according to Claim 11, wherein said guiding tighten-down means comprises a rolling thrust bearing disposed in the upper portion of the drive housing and a bell covering said hub and thrust bearing.

Claim 14. (Currently amended) An improved head according to Claim 11, wherein said hub is formed on its inside diameter with an axial slot for pulling out ~~a~~ the connection tongue between said tube and the drive.

Claim 15. (Currently amended) An improved head according to Claim 6, wherein ~~a~~ the packing pre-loading spring in the stuffing box is disposed inside a split casing to prevent overloading the spring when in the compressed state.

Claim 16. (Currently amended) An improved head according to Claim 8, wherein a ring spacer is provided in the stuffing box which is bored for communication with ~~a~~ the liquid lubricant inlet hole.

Claim 17. (Currently amended) An improved head according to Claim 16, wherein said bored ring spacer is formed with an annular seat for a lip-type oil seal arranged to contact the small

diameter of said unitary piece including said tube and sleeve tube/sleeve.

Claim 18. (Previously presented) An improved head according to Claim 16, wherein said bored ring spacer is formed with an axial middle ledge for insertion past the lip of an adjacent ring seal.

Claim 19. (Previously presented) An improved head according to Claim 1, wherein a gasket carrying a labyrinth pattern on its inside diameter is keyed to the bottom end of the sleeve for rotation therewith.

Claim 20. (Previously presented) An improved head according to claim 1, wherein a shaft locking clamp, placed within the body of the stuffing box, comprises a jaw pair, one pulls and one pushes, operated through a screw arranged to act with its end on one jaw and engaged in a threaded hole formed in the other jaw.

Claim 21. (Previously presented) An improved head according to Claim 20, wherein said push and pull jaws are operated through a screw arranged to act with its end on the push jaw and engaged in the threaded hole formed in the pull jaw.

Claim 22. (Currently amended) An improved head according to Claim 20, wherein the stem of the screw is cylindrical and fits through a seal on a ~~the~~ cover.

Claim 23. (Currently amended) An improved head according to Claim 20, wherein guide and elastic bias members are provided between the pull jaw and a ~~the~~ cover.

Claim 24. (Currently amended) An improved head according to Claim 1, wherein a clamp with self-centering jaws is associated with the body of the stuffing box, the jaws gripping the shaft in a wedge contact relationship of the outer surfaces of the jaws to the inner surface of the sliding body of the clamp under the action of a ~~the~~ tighten-down screw.

Claim 25. (Previously presented) An improved head according to Claim 24, wherein the wedge contact is advantageously achieved by provision of a conical surface taper.

Claim 26. (Previously presented) An improved head according to Claim 24, wherein the radial gripping movement of the jaws is guided by a prismatic fit to the clamp housing or cover.

Claim 27. (Previously presented) An improved head according to Claim 24, wherein an elastic means is mounted between the two jaws to open them when the clamping action is released.

Claim 28. (Previously presented) An improved head according to Claim 24, wherein the shaft-gripping surfaces are semicircular about a center that is offset from the shaft centerline in a direction toward the opposite jaw.

Claim 29. (Withdrawn) A clamp for locking the rotary pump drive shaft in crude oil wells, comprising:

jaws adapted to be closed around the drive shaft by screws,

wherein said jaws are paired, one pulls and one pushes, for operation by a screw acting with its end on one jaw and engaged in a threaded hole formed in the other jaw.

Claim 30. (Withdrawn) A clamp according to Claim 29, wherein it comprises a jaw pair, one pulls and one pushes, for operation by means of a screw acting with its end on the push jaw and engaged in a threaded hole formed in the pull jaw.

Claim 31. (Withdrawn) A clamp according to Claim 29, wherein the stem of the screw is cylindrical and fits through a seal on the cover.

Claim 32. (Withdrawn) A clamp, according to claim 29, wherein between the pull jaws and the

cover there are guide and elastic-reaction parts.

Claim 33. (Withdrawn) A clamp for locking the rotary pump drive shaft in crude oil wells, comprising:

jaws adapted to be closed around the drive shaft by means of a screw,

wherein the self-centering jaws are operated to close by a wedge contact relationship established between the outer surfaces of the jaws and the inner surface of the sliding body of the clamp under the action of the tighten-down screw.

Claim 34. (Withdrawn) A clamp according to Claim 33, wherein the wedge contact is achieved by provision of a conical surface taper.

Claim 35. (Withdrawn) A clamp according to Claim 33, wherein the radial gripping movement of the jaws is guided by a prismatic fit to the clamp housing or cover.

Claim 36. (Withdrawn) A clamp according to Claim 33, wherein an elastic means is mounted between the two jaws to open them when the clamping action is released.

Claim 37. (Withdrawn) A clamp according to Claim 33, wherein the shaft-gripping surfaces are semicircular about a center that is offset from the shaft centerline in a direction toward the opposite jaw.